

REMARKS

This is intended as a full and complete response to the Final Office Action dated June 16, 2006, having a shortened statutory period for response set to expire on September 16, 2006. Claims 1-7, 9-18, and 20-22 have been examined. The Examiner rejected claims 1, 3-5, 7, 9-12, 14-16, 18, and 20-22 under 35 U.S.C. § 102(b) as being anticipated by Ishimura (U.S. 5,602,672). The Examiner rejected claims 2 and 13 under 35 U.S.C. § 103(a) as being obvious over Ishimura in view of Roxlo (U.S. 4,863,245). The Examiner rejected claims 6 and 17 under 35 U.S.C. § 103(a) as being obvious over Ishimura.

Claim Rejections

The Examiner rejected claims 1 and 10 under 35 U.S.C. § 102(b) as being anticipated by Ishimura. The Examiner also rejected claims 2 and 13 under 35 U.S.C. § 103(a) as being obvious over Ishimura in view of Roxlo. Further, the Examiner rejected claims 6 and 17 under 35 U.S.C. § 103(a) as being obvious over Ishimura.

Applicants respectfully traverse the rejection. Claims 1 and 10 include the limitations of claims 2 and 13, respectively, and therefore no new matter has been added. Specifically, claims 1 and 10 include the limitation of a Lithium Niobate chip. As admitted by the Examiner on page 4 of the Office Action, Ishimura fails to disclose a modulator formed of lithium-niobate. Further, the Examiner failed to establish a prima facie case of obviousness because there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings in accordance with MPEP 2143.03. Again, Ishimura fails to disclose a modulator formed of lithium-niobate. The Examiner attempts to supplement this missing element by utilizing Roxlo. The Examiner states that it would have been obvious to one having ordinary skill in the art to integrate the laser diode and the modulator onto a single chip from the teaching of Roxlo because the forming of the modulator from lithium-niobate has superlattice properties that allows one having ordinary skill in the art to deposit it onto a substrate as a thin layer at a low temperature without lattice matching constraints. Even if that were true, the references must suggest the desirability of the claimed invention according to MPEP 2143.03. Specifically, the teachings of the references must provide a motivation to combine the references. Ishimura discloses a laser chip comprising a laser "2" and a light modulator "1". (See Ishimura, col. 7,

lines 7-12) Therefore, since Ishimura already discloses a laser chip integrating a laser and a light modulator, there can not be a motivation to combine Ishimura with Roxlo for the same purpose. Rather, the motivation must come from a desire to form a modulator from lithium-niobate due to its superlattice properties, which the Examiner is suggesting. However, the Examiner must *particularly* identify any suggestion, teaching or motivation from *within* the references to combine the references (emphasis added). See In Re Dembiczak, 50 USPQ2d 1614 (Fed. Cir. 1999). There is simply no teaching or suggestion in either reference that modifying the laser chip in Ishimura to include a lithium-niobate modular is at all desirable.

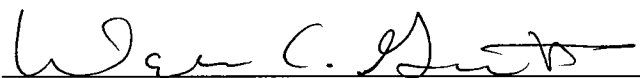
Furthermore, the reference (or references when combined) must teach every element of the claim. Claims 1 and 10 include the limitations of a RF connector and a RF electrode. As admitted by the Examiner on page 5 of the Office Action, Ishimura is silent regarding the RF electrode. The Examiner further states that it is inherent that electrodes comprise metal, and since metal is capable of carrying, transmitting, and receiving a radio frequency, the electrodes disclosed in Ishimura are RF electrodes. Ishimura does not mention the material composition of the electrodes. Even if the electrodes disclosed in Ishimura are made from metal, this does not necessarily indicate that the electrodes disclosed in Ishimura are RF electrodes or even that they are configured to be RF electrodes. Moreover, there is no mention in Ishimura of a RF connector as recited in claims 1 and 10. Further, Roxlo fails to cure the deficiencies of Ishimura. As clearly stated in MPEP 2131 and 2143.03, to anticipate a claim or to establish a prima facie case of obviousness, the prior art reference must teach or suggest all the claim limitations. As a result, claims 1 and 10 are patentable over Ishimura or the combination of Ishimura and Roxlo.

As the foregoing illustrates, Ishimura fails to anticipate claims 1 and 10, and the combination of Ishimura and Roxlo fails to render claims 1 and 10 obvious. Applicants therefore submit that claims 1 and 10 are in condition for allowance and respectfully requests withdrawal of the § 102(b) and the §103(a) rejection. Additionally, since claims 3-7, 9, and 21 depend from claim 1 and claims 11-12, 14-16-18, 20, and 22 depend from claim 10, these claims are allowable for at least the same reasons as claims 1 and 10.

Conclusion

Having addressed all issues set out in the office action, Applicants respectfully submit that the case is in condition for allowance. If the Examiner has any questions, please contact the Applicants' undersigned representative at the number provided below.

Respectfully submitted,



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